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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Maura C. Cannon, Francis C. Cannon, Gabriel J. McCool,
Henry E. Valentin, and Kenneth J. Gruys

Serial No.: 09/479,040 Art Unit: 1634

Filed: January 7, 2000 Examiner: Arun K. Chakrabarti

For: POLYHYDROXYALKANOATE BIOSYNTHESIS ASSOCIATED PROTEINS
AND CODING REGION IN BACILLUS MEGATERIUM

ATTN: EXAMINER ARUN CHAKRABARTI:

Enclosed are copies of the 1449 forms and signed Declaration for the above-identified patent application, as requested.

Susan Vincent

Susan Vincent, Legal Assistant

1402862_v1

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NO. 8735

P. 2

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NO. 3206 P. 2

Form PTO-1449 (modified)		Atty. Docket No. 11899.0212.NPUSDO (MOBTS:12).	Serial No. 09/679,640
List of Patents and Publications for Applicant's		Applicant	
INFORMATION DISCLOSURE STATEMENT		Maura C. Cannon et al.	
(Use several sheets if necessary)		Filing Date: January 2, 2000	Group: 1443
U.S. Patent Documents See Page 2.	Foreign Patent Documents See Page 2	Other Art See Page 2.	

U.S. Patent Documents

Exam. Inq.	Ref. Doc.	Document Number	Date	Name	Class	Sub Class	Filing Date is Appropriate
AC	A1	5,942,660	08/24/99	Cannon et al.	300	294	04/04/96

Foreign Patent Documents

Exam. Inq.	Ref. Doc.	Document Number	Date	Country	Class	Sub Class	Translation Year/No
	B1	WO 92/19747	11/12/92	PCT			
	B2	WO 98/04713	02/03/98	PCT			

Other Art (Including Author, Title, Date of Patent/ Pages, Etc.)

Exam. Inq.	Ref. Doc.	Citation	
	C1	International Search Report for PCT/US00/06364 dated Dec 14, 2000	
	C2	Li, N. and Cannon, M.C., A Molecular Genetic Analysis of Polyhydroxyalcanoate (PHA) Accumulation in <i>Bacillus megaterium</i> , 95 th General Meeting of the American Society for Microbiology, 95: 547 (1995).	
	C3	McCool, G. and Cannon, M.C., Identification and Characterization of the phaBC Locus from <i>Bacillus megaterium</i> , 97 th General Meeting of the American Society for Microbiology, 97: 238 (1997).	
	C4	McCool, G. and Cannon, M.C., <i>Bacillus megaterium</i> polyhydroxyalcanoate gene cluster, complete sequence, EMBL Sequence Database, XPO02118821 (1999).	
	C5	McCool, G. and Cannon, M.C., Polyhydroxyalcanoate Inclusion Body-Associated Proximal and Coding Region in <i>Bacillus megaterium</i> , Journal of Biotechnology, 181: 585-592 (1999).	
AC	C6	Portman, M.J., et al., <i>trans</i> -activation of the <i>Escherichia coli</i> ara structural genes by a regulatory protein from <i>Bacillus megaterium</i> : potential use in polyhydroxyalcanoate production, Appl. Microbiol. Biotechnol., 49: 737-742 (1998).	

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NO. 8735 P. 3 ****

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NO. 3206 P. 3

Form PTO-1449 (modified)

Art. Docket No. 11899.0212.NPUS06 (MOIST-212)	Serial No. 09/679,049
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List of Papers and Publications for Applicant's

INFORMATION DISCLOSURE STATEMENT

(All documents if necessary)

U.S. Patent Documents See Page 1	Foreign Patent Documents See Page 2	Other Art. See Page 2
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Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)

Citation

Exain. Init.	Ref. Doc.	Citation
AC	C7	Poirier, Y., et al., Production of Poly(hydroxyalcanoates), a Family of Biodegradable Plastics and Elastomers, In: Bacteria and Plants, BioTechnology, 13: 142-150 (1995).
	C8	Poirier, Y., et al., Progress Toward Biologically Produced Biodegradable Thermoplastics, Adv. Mater., 5: 30-36 (1995).
AC	G9	Valentin, H.E., et al., Metabolic pathway for biosynthesis of poly(3-hydroxybutyrate-co-3-hydroxybutyrate) from 4-hydroxybutyrate by <i>Allochromatospirillum</i> , Eur. J. Biachem., 227: 43-60 (1995).

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PAGE 38 * RCVD AT 11/18/2003 4:46:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-21 * DNI:7464979 * CSID:404 898 8002 * DURATION (mm:ss):02:48

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NO. 8735 P. 4

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NO. 3206 P. 4

Form PTO-1440 (Modified) List of Patents and Publications for Applicant's Information Disclosure Statement		Atty Docket No. MOIST:479-212	Serial No. 007407440-079/479,040			
		Applicant(s): Gerard F. Barry, et al.				
		Filing Date: February 22, 2000	Group: 1652			
U.S. Patent Documents						
Exam. Ink.		Patent Number	Issue Date	Inventor Name(s)	Class/Subclass	Filing Date
AC	A1	5,229,278	7/1/1993	Peoples, et al.	435/136	
	A2	5,612,669	4/1/1996	Peoples, et al.	836/23.2	
	A3	5,851,026	8/19/1997	Peoples, et al.	435/252.3	
	A4	6,053,063	9/1/1997	Peoples, et al.	435/135	
	A5	5,634,432	7/1/1998	Peoples, et al.	435/240.4	
	A6	5,245,023	9/1/1993	Peoples, et al.	536/23.2	
	A7	5,250,430	10/1/1993	Peoples, et al.	435/292	
	A8	5,480,704	8/1/1994	Peoples, et al.	435/232	
Foreign Patent Documents						
		Doc. Number	Date	Country	Class/Subclass	Translation Yes/No
	B1					
Other Information						
	C1	deMets, M.J., G. Eggink, B. Witmolt, J. Kingma, and H. Wynberg. 1983. Characterization of intracellular inclusions formed by <i>Pseudomonas oleovorans</i> during growth on octane. <i>J. Bacteriol.</i> , 154: 870-878.				
	C2	Dunlop, W. and A.W. Roberts. 1973. Ultrastructural study of poly- β -hydroxybutyrate granules from <i>Bacillus cereus</i> . <i>J. Bacteriol.</i> , 116: 1271-1280.				
	C3	Eggink, G., P. de Wael, and G.N.M. Huijbregts. 1982. The role of fatty acid biosynthesis and degradation in the supply of substrates for poly(β -hydroxyalcanoate) formation in <i>Pseudomonas putida</i> . <i>FEMS Microbiol. Rev.</i> , 103: 159-184.				
	C4	Eller, D., D.G. Lundgren, K. O'Donnell, and R.H. Marchesault. 1988. Morphology of poly- β -hydroxybutyrate granules. <i>J. Mol. Biol.</i> , 203: 485-502.				
	C5	Foster, R.C., J.P. O'Donnell, J. Sauerfein, T.E. Redlinger, J. Foster, and R.W. Lenz. 1992. The supramolecular architecture of the polyhydroxyalcanoate inclusions in <i>Pseudomonas oleovorans</i> . <i>FEMS Microbiol. Rev.</i> , 103: 279-288.				
	C6	Gengroen, T.U., P. Reilly, J. Shubbe, A.J. Simskey, and G.P. Peoples. 1993. Immunocytochemical analysis of poly- β -hydroxybutyrate (PHB) synthase enzyme at the surface of PHB granules. <i>J. Bacteriol.</i> , 175: 5248-5253.				
AC	C7	Griebel, R., Z. Smith, and M. Merrick. 1988. Metabolism of poly- β -hydroxybutyrate. 1. Purification, composition, and properties of native poly- β -hydroxybutyrate granules from <i>Bacillus megaterium</i> . <i>Biochem.</i> , 7: 3676-3681.				

PAGE 4/5 * RCVD AT 11/18/2013 4:43:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/1 * DNIS:7404979 * CSID:4043983862 * DURATION (mm:ss):02:48

PAGE 4/11 * RCVD AT 12/17/2003 10:42:08 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID: * DURATION (mm:ss):05:26

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NO. 3206 P. 5

Form PTQ 1449 (Modified)

US Serial No. 09/137,440

Group Art Unit: 1652

Page 2.

		Other Information (cont'd.)
AC	C8	Haywood, G.W., A.J. Anderson, L. Chu, and G.A. Dowe. 1986. Characterization of two 3-Ketothiolases in the polyhydroxyalkanoate synthesizing organism <i>Alcaligenes eutrophus</i> . <i>FEMS Microbiol. Lett.</i> , 52: 91-96.
	C9	Huang, A.H.C. 1992. Oil bodies and droplets in seeds. <i>Annu. Rev. Plant Physiol. Plant Mol. Biol.</i> , 43: 177-200.
	C10	Lauzier, C., R.H. Marchaisseult, P. Smith, and H. Charzy. 1972. Structural study of isolated poly(β -hydroxybutyrate) granules. <i>Polymer</i> , 33: 826-827.
	C11	Lee, S.Y. 1996. Bacterial polyhydroxyalkanoates. <i>BioTechnology & Engineering</i> , 40: 1-14.
	C12	Lundgren, D.G., R.M. Pfleider, and J.R. Mennier. 1964. Structure of poly- β -hydroxybutyric acid granules. <i>J. Gen. Microbiol.</i> , 34: 441-446.
	C13	McCook, G.J., T. Fernandez, N. Li, and M.C. Cannon. 1986. Polyhydroxyalkanoate inclusion-body growth and proliferation in <i>Beckius megalotum</i> . <i>FEMS Microbiol. Lett.</i> , 33: 41-48.
	C14	Pieper-Funst, U., M.H. Medkour, F. Meyer, and A. Steinbüchel. 1994. Purification and characterization of a 14-kilodalton protein that is bound to the surface of polyhydroxyalkanoic acid granules in <i>Rhodococcus ruber</i> . <i>J. Bacteriol.</i> , 176: 4326-4337.
	C15	Pieper-Funst, U., M.H. Medkour, F. Meyer, and A. Steinbüchel. 1995. Identification of the region of a 14-kilodalton protein of <i>Rhodococcus ruber</i> that is responsible for the binding of this Phasin to polyhydroxyalkanoic acid granules. <i>J. Bacteriol.</i> , 177: 2513-2523.
	C16	Steinbüchel, A., K. Acire, W. Babel, C. Folner, NC Debargassell, M.H. Medkour, F. Meyer, U. Pieper-Funst, A. Pries, H.E. Valentini, and R. Wieczorek. 1995. Considerations on the structure and biochemistry of bacterial polyhydroxyalkanoic acid inclusions. <i>Curr. J. Microbiol.</i> , 41: 104-105.
	C17	Steinbüchel, A., E. Flügge, M. Liebargassell, U. Pieper, A. Timm, and H. Valentini. 1992. Molecular basis for biosynthesis and accumulation of polyhydroxyalkanoic acids in bacteria. <i>FEMS Microbiol. Rev.</i> , 103: 217-230.
	C18	Steinbüchel, A. and H.G. Schlegel. 1991. Physiology and molecular genetics of poly(β -hydroxyalkanoic acid) synthesis in <i>Alcaligenes eutrophus</i> . <i>Mol. Microbiol.</i> , 5: 535-542.
	C19	Steinbüchel, A. and H.E. Valentini. 1985. Diversity of bacterial polyhydroxyalkanoic acids. <i>FEMS Microbiol. Lett.</i> , 216: 219-226.
	C20	Wang, W.B. and D.G. Lundgren. 1969. Poly- β -Hydroxybutyrate in the chemolithotrophic bacterium <i>Prosthecothele ferrooxidans</i> . <i>J. Bacteriol.</i> , 97: 947-950.
	C21	Wieczorek, R., A. Pries, A. Steinbüchel, and F. Meyer. 1995. Analysis of a 23-kilodalton protein associated with the polyhydroxyalkanoic acid granules in <i>Alcaligenes eutrophus</i> . <i>J. Bacteriol.</i> , 177: 2425-2436.
AC	C22	Wieczorek, R., A. Steinbüchel, and B. Schmidt. 1996. Occurrence of polyhydroxyalkanoic acid granule-associated proteins related to the <i>Alcaligenes eutrophus</i> H16 GA24 protein in other bacteria. <i>FEMS Microbiol. Lett.</i> , 135: 23-30.

Attn: Mr. Chakrabarti

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